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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,332	04/28/2006	Robert D. Kaminsky	2003UR038	7453
7590 02/25/2008				
J Paul Plummer ExxonMobil Upstream Research Company Corporation Urc Sw 337 PO Box 2189 Houston, TX 77252-2189			EXAMINER BATES, ZAKIYA W	
			ART UNIT 3676	PAPER NUMBER
			MAIL DATE 02/25/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/577,332

Applicant(s)

KAMINSKY ET AL.

Examiner

Zakiya W. Bates

Art Unit

3676

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 11, 12, 18-20, 22-25, 27, and 28 is/are rejected.
- 7) ☒ Claim(s) 4, 10, 13-17, 21 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 24, line 1, the term "non-Darcy flow" fails to make sense. In line 3, the term "the Ergun equation" lacks antecedent basis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claims 1-3, 5-9, 11, 12, 18-20, 22-25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butler (US 4,344,485 cited by applicant) in view of Nordgren et al. (US 3,500,913 cited by applicant).

Butler discloses an in situ method for maturing and producing oil and gas from a deep-lying, impermeable formation containing immobile hydrocarbons, comprising the steps of:

- (a) pressure fracturing a region of the hydrocarbon formation, creating a vertical, propped fracture (see Fig. 3);
- (b) injecting under pressure a heated fluid into a first part of the vertical fracture, and recovering the injected fluid from a second part of the fracture for reheating and recirculation, said pressure being less than the fracture opening pressure, said injected fluid being heated sufficiently that the fluid temperature upon entering each fracture is at least 260°C but not more than 370°C (580 deg. F), and the separation between said first and second parts of each fracture being less than or approximately equal to 200 meters (200-1000 ft);
- (e) recovering, oil and gas matured in the region of the hydrocarbon formation due to heating of the region by the injected fluid, the permeability of the formation being increased by such heating thereby allowing flow of the oil and gas into the fractures; and
- (d) separating the produced oil and gas from the recovered injection fluid.

However, the reference fails to teach creating a plurality of vertical fractures and recovering oil and gas commingled with the injected fluid, as called for in the claims.

Nordgren et al. teaches an in situ method that includes creating a plurality of vertical fractures 14-18 and recovering oil and gas commingled with the injected fluid (see Fig. 2, via 33, 12 to surface processing). The techniques of: 1) creating multiple fractures as opposed to a single one; and 2) separation of produced fluids above-ground as opposed to in situ gravity separation are well known in the art. The technique(s) would have been considered simple substitution of one known technique for the other to obtain predictable results to one of ordinary skill at the time of invention.

With respect to the depending claims, the Butler reference and/or the combination of Butler in view of Nordgren et al. teach the limitations as claimed. See each reference in its entirety. With respect to Butler, see especially Figs. 2-4, wells 10, 11, col. 10, line 47 - col. 11, line 44, and col. 13, lines 16-50. With respect to Nordgren et al., see especially Figs. 1 and 2, col. 2, line 43 - col. 3, line 40, and col. 3, line 52 - col. 6, line 24.

Allowable Subject Matter

7. Claims 4, 10, 13-17, 21, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zakiya W. Bates whose telephone number is (571) 272-7039. The examiner can normally be reached on Monday-Friday, 8:30 AM-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on (571) 272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zakiya W. Bates/
Primary Examiner
Art Unit 3676

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February 19, 2008